

IN THE CLAIMS

This listing of claims replaces all prior versions and listings of the claims in the above-referenced application.

1. (Previously Amended) A light-emitting device comprising:

a semiconductor heterostructure including at least one p-type layer and one n-type layer; and

a p contact and an n contact, the p contact electrically connected to the p-type layer, the n contact electrically connected to the n-type layer, wherein at least one of the p and n contacts is a multi-layered contact external to the semiconductor heterostructure, the multi-layered contact comprising:

a metallic reflector layer;

a continuous uniform conducting sheet that makes ohmic contact to the heterostructure; and

a conductive barrier layer interposing the reflector layer and the continuous uniform conducting sheet;

wherein the multi-layer contact has a reflectivity greater than 75% for light at an operating wavelength of the light-emitting device.

2. (Cancelled).

3. (Original) A device, as defined in claim 1, wherein the multi-layer contact has a specific contact resistance less than $10^{-2} \Omega \cdot \text{cm}^2$.

4. (Cancelled).

5. (Original) A device, as defined in claim 1, wherein the reflector layer has a thickness greater than 500 Å.

6. (Previously Amended) A device, as defined in claim 1, wherein the sheet that makes ohmic contact to the heterostructure has a thickness less than 200 Å.

7. (Original) A device, as defined in claim 1, wherein the reflector layer is selected from the group consisting of Al, Cu, Rh, Pd, and Au.

8. (Original) A device, as defined in claim 1, wherein the p and n contacts are on opposing faces of the heterostructure.

9. (Previously Amended) A device, as defined in claim 8, wherein the sheet that makes ohmic contact to the heterostructure includes Ni and Ag.

10. (Original) A device, as defined in claim 8, wherein the reflector layer is Ag.

11. (Previously Amended) A light-emitting semiconductor device comprising: a semiconductor heterostructure having at least one p-type and one n-type layer; and a p contact and an n contact, the p contact electrically connected to the p-type layer, the n contact electrically connected to the n-type layer, wherein at least one of the p and n contacts is a multi-layer contact external to the semiconductor heterostructure, the multi-layer contact comprising:

a metallic reflector layer selected from the group of Al, Rh, and Ag; and a continuous uniform conducting sheet that makes ohmic contact to the heterostructure;

wherein the multi-layer contact has a reflectivity greater than 75% for light at an operating wavelength of the light-emitting device and wherein the multi-layer contact has a specific contact resistance less than $10^{-2} \Omega \cdot \text{cm}^2$.

12-13. (Canceled).

14. (Previously Amended) A device, as defined in claim 11, the multi-layer contact further comprising a barrier layer interposing the reflector layer and the sheet.

15. (Original) A device, as defined in claim 11, the reflector layer having a thickness greater than 500 Å.

16. (Previously Amended) A device, as defined in claim 11, the sheet that makes

ohmic contact to the heterostructure having a thickness less than 200 Å.

17. (Cancelled).

18. (Previously Amended) A device, as defined in claim 11, wherein the sheet that makes ohmic contact to the heterostructure is selected from the group that consists of Ti, Au/NiO, and Ni/Au.

19. (Previously Added) A device, as defined in claim 1, wherein the semiconductor heterostructure includes at least one III-nitride layer.

20. (Previously Added) A device, as defined in claim 11, wherein the semiconductor heterostructure includes at least one III-nitride layer.